Allium constrictum (Mingrone & Ownbey)

Douglas' constricted onion

Liliaceae(Lily family)

Status: State Sensitive
Rank: G2G3S2S3

General Description: A short, narrow-leaved onion with pink flowers, 5 to 9 inches tall. The narrow flower stalk is less than ¼ inch wide, and it rises above two curving, channeled, leaves, which are also less than ¼ inch wide. At the top of the flower stalk, the scape is conspicuously thickened and then constricted just below the flower cluster. The bulb occurs a few inches below the ground, and is ½-¾ inches wide. Before it starts flowering in June, the flower cluster is covered by a spherical, greenish-white sheath, and it is during this stage that it is most conspicuous; when it is flowering there are similar species of onion growing with it. The flowers are about ¼ inch long. The tepals are gradually narrowed to a point and are keeled when the plants are in fruit. In July, the small fruit capsules mature, open widely, and release tiny black seeds.

Identification Tips: Four other species of *Allium* (*A. macrum, A. scilloides, A. acuminatum, and A. geyeri*) are known to occur throughout the range of *A. constrictum*. These four other species do not have a constriction just below the flower cluster like *A. constrictum*.

Phenology: The leaves emerge in late March or early April. The young flowers, enclosed within the umbel bracts, appear in late April and early May, and start opening in mid and late May. Full bloom is reached in early and mid-June, and tapers off by early July. Seeds are fully mature by mid-July, and are dispersed by late July. Field inventories are most successful in May, before flowering, because the "heads" stand out conspicuously.

Range: Local endemic; found around the upper end of Grand Coulee, in Grant and Douglas counties, Washington. Its known range is about 23 miles long and 11 miles wide. It occurs within the Columbia Basin physiographic province.

Habitat: Vernally moist areas on flat basalt lithosol and around the margins of rocky vernal ponds. It is less common on drier lithosols, and rarely seen on the driest lithosols. Elevation ranges from 2070-2550 feet. It occurs within shrub-steppe vegetation,

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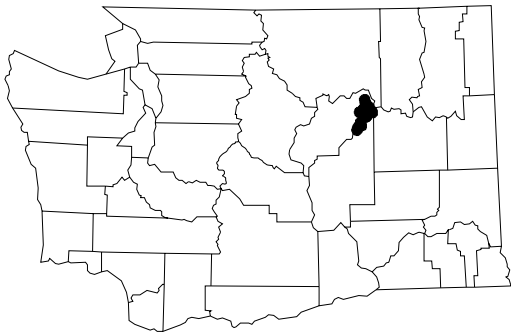
Known distribution of *Allium constrictum* in Washington



● Current (1980+)
○ Historic (older than 1980)

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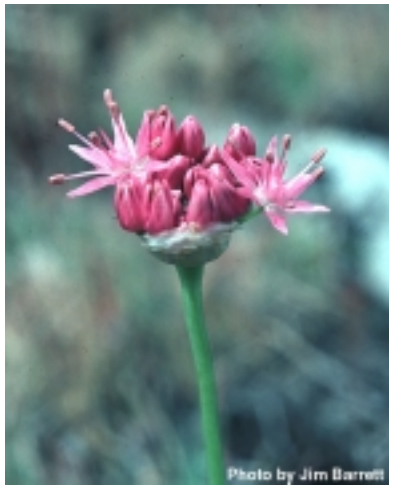

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Habitat (continued)**:** growing in the *Artemisia rigida / Poa secunda* habitat type with thyme buckwheat (*Eriogonum thymoides*), spinescent fameflower (*Talinum spinescens*), and sagebrush violet (*Viola trinervata*). *A* cryptogam layer is also present.

Ecology: *A. constrictum* grows in areas with little or no shade. Rust infections are commonly seen; heavily infected plants show a significant loss of vigor, including seed abortion. Herbivory by insects is relatively minor. Competition may be high in vernally moist areas.

State Status Comments: The extremely limited geographic range of the species and its restriction to a narrow range of habitats are the primary factors contributing to its state status.

Inventory Needs: Appropriate habitats within the known range should continue to be inventoried for the species, particularly if any projects or developments are planned that might affect the habitat.

Threats and Management Concerns: Cattle grazing in low to moderate intensities has apparently not been detrimental to this taxon, but the effect that other livestock (horses, sheep, etc.) pose is not known.

Comments: Synonymous with *Allium douglasii* Hook. var. *constrictum* Mingrone & Ownbey.

References:

Hitchcock, C.L., A. Cronquist, M. Ownbey, and J.W. Thompson. 1969. Vascular Plants of the Pacific northwest, Part 1: Vascular Cryptograms, Gymnosperms, and Monocotyledons. University of Washington Press, Seattle. 914 pp.

Peterson, P.M., C.R. Annable, and L.H. Reiseberg. 1988. Systematic Relationaships and Nomenclatural Changes in the *Allium douglasii* Complex (Alliaceae). Systematic Botany 12(2): 207-214.

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